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The Influence Parents have on College Students' Grades

by

Jordann Markowitz

A Thesis

Presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

Master of Arts

in

Sociology

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Jordann Markowitz

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The Influence Parents have on College Students' Grades
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ABSTRACT

What is the influence of parents on college students' grades? While social capital from parents, through the lens of parental involvement, has been used in research of both primary and secondary schools, it has not been fully examined at the undergraduate level. 172 undergraduate students at Lehigh University were given a survey to see what influence social capital from parents may have on their grades. Social Capital was measured as parental involvement. The main hypothesis is that while some parental involvement will be beneficial to students, it will reach a point, which will actually be harmful to the students' grades. This hypothesis was tested using a Structural Equation Model; the effects of class year and gender were also examined. The main finding was that parental involvement has both a positive and negative influence on students' grades. Females had more non-academic parental involvement and freshmen and sophomores had higher GPAs.

INTRODUCTION

Sociologists can study a wide range of topics. Two major topics in sociology are family and education. In many ways these two topics intersect. Parents are asked to be a large part of their children's schooling when they are younger, but that tends to change as the child ages. Nowadays the media spends a lot of time talking about "helicopter parents" or parents who remain too involved in their older children's lives. This has been mentioned in regards to college parents.

When children go to college they may no longer be living with their parents. Parents and their children may interact differently when the children move out of the home. Parents may try to give their children more independence; however, with the phenomenon of helicopter parenting it may just be an extension of the high school relationship. It is also then possible that children appreciate the help more now that they are on their own. It is also possible that helicopter parenting does not happen that often and is in fact being blown out of proportion by the media. There may be a plethora of different parent-child relationships going on in college and those differences may either be beneficial or harmful for college students.

I am interested in exploring more in depth how prevalent helicopter parenting actually is in college. Helicopter parents may influence their children in multiple ways while in college. This may be determined by the parents' social capital. Social capital has been defined as both the connections between people and the resources that flow through these connections. The link to parents may help students feel secure in new surroundings and more comfortable in exploring the new environment of college. Parents with knowledge about college may also be able to provide resources, such as information on

how to deal with time management or a noisy roommate. Parents may also be able to use their connections to help their children find internships and eventually jobs. Depending on the type of relationship that parents and children have may determine if the children can get access to the parent's social capital. This social capital may also be helpful for academic achievement in college.

I am interested in how the parent-child relationship affects the students' academic achievement. It is possible that parents have enough influence on their children to influence both their academic behaviors and their GPAs. Of course, it could be argued that students have different behaviors and GPAs because of genetics. Not everyone has the same intelligence. That is why I am interested in looking at students who go to private universities and colleges. To get into these schools, students go through a rigorous application process. It then makes sense that these students are of a certain academic and social caliber. The question then becomes what makes some of them do well academically in college, while others do not. It may be that some students are more suited to that type of work than others. There is also the possibility that the type of relationship students have with their parents may influence their academic achievement.

This is important to study for multiple reasons. Sociologists have spent barely any time studying the influence parents may have on college students' grades. Sociologists have focused mostly on the pre-college years when looking into this subject. It should help to illuminate the phenomenon of helicopter parenting. This study should help to indicate if helicopter parenting is actually occurring or not. It will also help to show if it is beneficial or not for students.

This study is broken up into chapters. Chapter two gives a deeper look into the research that has already been done on college students, their relationship with their parents, and social capital. Chapter three gives a description of the methodology I used to conduct my research. In order to study this topic I used quantitative methods. Undergraduate students at Lehigh University were given a survey to assess this problem. They were asked questions about their relationship with their parents and their academics. OLS regressions and a structural equation model were used to test each hypothesis. Chapter four will explore the results I found from my analyses. In chapter five I will discuss what I found and how that relates to my hypotheses. In chapter six I will tie all the different pieces of my study together in some concluding remarks.

LITERATURE REVIEW

Introduction

My research fits into a contemporary debate about family and education. Sociologists, psychologists, and education researchers have studied both of these topics in multiple capacities both related and unrelated to each other. Specifically, my research has to do with the influence parents have on college students' grades. Here, I will first discuss a little about a new life stage, emerging adulthood, and the purpose of college. Following that I will review aspects of college students' academic life; the relationship between parents and children; and how gender and social capital influence education. I will end with a look at what past research has learned relating to education and family in regards to socioeconomic status and race.

How do Emerging Adults and the Purpose of Schools Mix?

Arnett has coined the term "emerging adulthood" to describe what he argues is a new life stage that falls between childhood and adulthood. Arnett (2000) defines this stage as being "distinguished by relative independence from social roles and from normative expectations...emerging adults often explore a variety of possible life directions in love, work and worldviews" (p. 469). This exploration is possible in part because there is less parental supervision during this life stage (Arnett, 2000). College students may be an unique set of emerging adults because they are only semiautonomous under the authority of an institution of higher education (White, 1994). At the same time, Lewis (2007) points out that parents are normally paying for their children's college education so the college has to keep them happy; parents use this entitlement to contact professors about their kid's grades causing students to not learn to stick up for

themselves. While parents knowing what is going on at college may seem negative, it can reduce the amount of risky behaviors, such as drinking and sexual behaviors (Padilla-Walker et al., 2008).

While these students may be learning to make independent decisions and taking responsibility for themselves (Arnett, 2000), they also have to start determining what to do with their futures. These students may have high ambitions, but do not actually know what education they need for a chosen occupation causing them to become “drifted dreamers” (Schneider and Stevenson, 1999). Even with these high ambitions they have to realize two things. One is that the purpose of school is to evaluate students, creating inequality among them (Kerckhoff, 1991); the other is that the bachelor’s degree is the new high school diploma (Schneider and Stevenson, 1999). These emerging adults will leave college with the same degree as most everyone else in the country, making grades even more important to future success.

The College Experience

Some Basics About Grades in College

Previous research has focused both on why students study and what causes them to receive certain grades. Bogler and Somech (2002) discovered that when studying students have either an extrinsic motivation, e.g. to get good grades, or intrinsic motivation, e.g. to increase their knowledge of a topic. Even with these motivations, students will earn different grades. Rau and Durand (2000) discovered that having a higher high school rank and having the right academic ethic leads to a student having a higher college GPA; cramming and high drinking rates lead to a lower GPA. Hartman (2009) found that girls and students from the middle class have higher GPAs. Finally

students who are more extraverted and have more social connections have higher GPAs (Pang, 2009; Rau and Durand, 2000; Hartman, 2009). All of the above traits help predict a student's GPA in college.

Who is More Likely to Attend College

There are a few factors researchers have looked into to see what type of people are more likely to attend college. Smith et al. (1995) found that females are less likely to attend college. A few studies have looked at residency. Kim and Schneider (2005) established that people from urban and rural communities were more likely to attend than people from suburban communities; however, Smith et al. (1995) disagree, finding that suburban students were the most likely to attend because suburban families have higher incomes. Both studies discovered that the higher the family income the more likely students were to attend college (Smith et al., 1995); Kim and Schneider (2005) found family income related to attending more selective colleges, not college in general. Perna and Titus (2005) discovered that the more a family moves the less likely a person is to attend college.

Parents have an influence on their children attending college. The more education they have, the more likely their child is to go to college (Kim and Schneider, 2005). Parents may need to do more than have graduate degrees. The more parents talk to their children about education topics, the more likely they are to attend college (Perna and Titus, 2005). In Mexican-American families, parents helping their children with schoolwork and wanting their kids to get a degree made them more likely to get into college (Hurtado-Ortiz and Gauvain, 2007).

First-Year College Adjustment

First-year college students are unique in the fact that they have to adjust to having semi-autonomy. Yarborough and Brown (2003) argue that this occurs in three phases. First, they go through anticipatory socialization in which they gather information about the school. Second, in the encounter stage, students start college and learn if their needs are met; if yes, students start to find their place at college and make friends (Yarborough and Brown, 2003). Third, students become assimilated to the norms, behaviors, and values of the institution, no longer feeling like an outsider, and being satisfied with their work (Yarborough and Brown, 2003). Students may differ on their success in each of these stages. For instance, Shields (2002) focused on the first stage and the difference first between first and second-generation students and then between first and second sibling students. She discovered that second-generation students felt more prepared, but realized the necessity to attend class, while first-generation students focused on needing to learn time management (Shields, 2002). She found that neither generation nor sibling status influenced whether the student felt successful at college (Shields, 2002).

Parents are influential in how their children adjust to college. The better the relationship between students and their parents is, the better their adjustment to college (Yazedjian et al., 2009; Kolkhorst et al., 2010). This may be related to the fact that having a relationship with parents leads to more emotional support since Kenny and Donaldson (1991) found that students believed that their parents provided emotional support when they needed it. This may be especially important for females because females who have moderate levels of family anxiety about separation, but emotional support have better levels of social competence (Kenny and Donaldson, 1991). The

gender of the parent also affects adjustment. Maternal relationships only affect their academic adjustment, whereas their paternal relationships can affect their personal, emotional, social, academic, and institutional adjustment (Soucy and Larose, 2000). Students feeling that their parents helped to facilitate their independence and having their support leads to better adjustment (Kolkhorst et al., 2010). Finally, parental education is related to adjustment (Yazedjian et al., 2009). All of this is important because not only is adjustment related to GPA (Yazedjian et al., 2009), but the quality of the relationship with parents and the more students rely on their parents for support the better their GPA (Kolkhorst et al., 2010). This support may continue throughout the college years since Sun et al. (2000) found that there is no change in the relationship between parents and children during college.

Parents Financing College

College is a big change for many students. Because of that, they end up relying on their parents emotionally and financially to maintain the standards they are used to at home while at school (Horowitz, 1987). Of course not all parents are willing to help pay for college. Steelman and Powell (1991; 1989) found that the more siblings a student has, the more parents think the student should be for paying for college, thus causing them to have more loans. This, however, is sometimes dependent on the skills of the students. Parents with high achieving students are less worried about paying for college since they may believe that their child can receive scholarships and loans (Steelman and Powell, 1991). In fact, students with better achievement have more parental aid but that does not make up as large a proportion of their financial support; this is most likely caused by students going to expensive schools and receiving scholarships (Steelman and Powell,

1989). Parents are also more likely to pay for their children's college and assume debt if they have more resources, are highly educated, are married, and had their parents pay for college (Steelman and Powell, 1991).

Receiving financial assistance from parents can have lasting effects on students' lives, both during and after college. Students whose parents pay for college are more likely to stay in school and eventually graduate (Steelman and Powell, 1989). This may be caused by the fact that financial support positively affects satisfaction with both the curriculum and instruction (Astin, 1993). Not only is this financial support important to graduate, but it has a positive effect on GRE composite performance (Astin, 1993). However, parents' financial aid may cause students to have a lower GPA during college (Hamilton, 2013).

The Dynamic Relationship between Parents and Children throughout the Life Course

Parents and their Children

While attachment to parents does not have an influence on students' GPAs (Petroff, 2009; Lonergan, 2003), it can still influence how students adjust academically to college (Bernier et al., 2004; Lapsley et al., 1990). Attachment to parents provides many benefits to students, which may then affect their grades. Students who are attached to their parents have higher self-esteem and life satisfaction while experiencing less stress, anxiety, and depression (Armsden and Greenberg, 1987; McCarthy et al., 2001; Vivona, 2000). Duchesne et al. (2007) found that students who saw their parents as less involved and less supportive of their independence experienced a decline in their academic and emotional adjustment to college. Having an attached relationship with parents can give students the confidence to do well in school.

Certain types of parenting styles can benefit students' grades more than others. Students who have authoritative parents (who have high standards, but support them) and enjoy working in school are more likely to have higher GPAs (Rivers, 2009). This may be specific to mother parenting styles since Abar et al. (2009) discovered this was only true for mothers who have authoritative parenting styles. They also found that mothers who expected their children to just obey them (authoritarian parenting style) had worse academic skills (Abar et al., 2009). Weiss and Schwartz (2009) support this by discovering that sons with authoritative parents had higher GPAs than sons with authoritarian-directive parents.

Attachment and Residence

College students can continue to live at home with their parents or in a residence close to the college. At the beginning of the first year of college, all students have the same level of attachment to parents, but the level of attachment for residential students decreases while away from home (Berman and Sperling, 1991). The relationship changes while the students are away from home in other ways. Flanagan et al. (1993) found that students who lived at home had parents who underestimated their maturity compared to students who lived away from home and experienced independence, but had support from parents. In fact, parents and children who share a residence after the child turns eighteen have a strained relationship, which can lead to psychological distress (Umberson, 1992). It may be good for parents to change to a less controlling parenting style while their kids are in college (Weiss and Schwarz, 1996). Parents who provided more autonomy and support had students who were more confident and related in a positive way to their teachers; however, residence has no influence on the relationship between parenting

characteristics and student success (Strage and Brandt, 1999). Leaving for college causes a change in the relationship between parents and children.

Even though college students may not be living at home, they may still have a relationship with their parents. In fact, the majority of adult children have a close relationship with their parents (Lye, 1996). Lawton et al. (1994) even found that 80% of their adult respondents felt emotionally close to their parents. Even with this relationship once children move out of their house, parents help them less (Rossi and Rossi, 1990). However, they will also be more likely to give aid than receive any from their children (Lye, 1996). The most common type of assistance for people under the age of 40 is advice (Cooney and Uhlenberg, 1992). Also, up until the age of 40, people see parents as a source of emergency, financial, and emotional help (Cooney and Uhlenberg, 1992). If parents feel that their children need attention they will remain more in contact with their children (Aldous, 1987). Parents may feel college students need attention since college students are the most likely to receive advice from parents (Cooney and Uhlenberg, 1992).

Contact with Parents while at College

One study discovered that seven out of ten students communicated very often with at least one of their parents (Shoup et al., 2009). In a study of how families stay in touch with each other, Stern and Messer (2009) discovered that e-mail and cell phones were the most common form of communication for non-local relatives. This seems to be the case for college students. Trice (2002) found that students averaged greater than one e-mail per week to parents. Bauman (2001) discovered that 52% of first year students used e-mail once a week to communicate with parents. However, e-mail has not become

a substitute for phone contact (Quan-Haase and Wellman, 2004). Over half of first year students use a cell phone four or more times per week to talk to their parents (Bauman, 2010). Parents may find this option for communication important since 79.6% of college students had their cell phone bill paid by their parents (Lee et al., 2009).

Parental Divorce, How does it affect the Parent/Child Relationship?

Children of divorce may not be so different than other children. Amato and Booth (1991) found that children of divorce had similar life satisfaction as peers from moderately-happy intact families, higher life satisfaction than peers from unhappily intact families, but lower life satisfaction than peers from very happily intact families. Divorce children have the same amount of social integration as their peers (Amato and Booth, 1991). They are likely to be less securely attached than their peers (Barber, 1998) and are also likely to receive less parental support (Booth and Amato, 1994). This may be why Barber (1998) found that children of divorce had lower GPAs than their peers. The gender of the parent that the child is living with has no affect on the student's academic achievement (Lee et al., 2007). However, if daughters are living with their father they are more likely to have high academic achievement if their father is more involved in school (Lee et al., 2007). Overall, children of divorce have less contact with their parents (Booth and Amato, 1994; Amato and Booth, 1991).

Divorce can have an effect on the relationship students have with each parent. Booth and Amato (1994) found that it impacted the relationship with fathers and their kids more than the relationship kids have with their mothers. This may be based on the amount of contact the child has with the father. Both White et al. (1985) and Aquilino (1994) found the same level of attachment to a father in an intact family as to a father that

has custody. If the father does not have custody, adult children were not as close to their nonresidential father compared to their peers who had intact families (Aquilini, 1994). This may be because just over half of kids from divorced families have weekly contact with their fathers (Cooney, 1994). Females have even less contact with fathers than males (Amato and Booth, 1991). There is an association between father-daughter intimacy and divorce (Cooney, 1994). Fathers may want contact, but find it difficult to manage since they lack kin skills (Cooney, 1994).

The relationship with mothers is different than with fathers. Children are more likely to live with their mother after a divorce, even if the divorce occurs when the child is legally an adult (Cooney, 1994). White et al. (1985) found that kids have a larger attachment to their custodial mother compared to their peers who come from intact families. Aquilino (1994) disagrees saying that there is no difference between the relationship between mothers and their kids in intact families compared to ones with a single mother. Divorce may not really affect the relationship between mother and children.

How Gender Plays Into All of This

Lapsley et al. (1990) found that there is no gender difference in attachment to parents. This may not be the case since Lye (1996) and Lawton et al. (1994) discovered that the relationship between mothers and daughters is the most intimate. Women are in charge of kin keeping and maintain the emotional bonds between family members (Lye, 1996). When the daughter receives aid from her mother there is an even greater feeling of attachment between them (Thompson and Walker, 1984). Regardless of gender, students almost always pursued need-based contact with mothers and often pursued need-based

contact with fathers (Sorokou and Weissbrod, 2005). Daughters are more likely to ask their mothers for advice on money issues and personal matters; sons tend to rely on fathers for these types of advice (Markides et al., 1986). In general, children rely on their mothers for advice on minor medical problems and when they are sick, while relying on their father for advice on home repair and upkeep (Markides et al., 1986). Even with wanting to ask parents for advice depending on their gender, one study found that their adult respondents felt more emotionally close to their mothers than fathers (Lawton et al., 1994).

There is a debate on which gender benefits more from attachment. Vivona (2000) found that parental attachment is more important for men's adjustment to college. Proof of this may be discovered in another study that found that males experienced more of a decline in academic adjustment than females (Duchesne et al., 2007). On the other hand, this study found that females declined more in emotional adjustment (Duchesne et al., 2007). This is related to the fact that females who are more attached to parents experience less stress, and the more stress females experience the lower their GPA (Petroff, 2009). While there may be a direct relationship between attachment and grades for males, there is an indirect one for females.

Social Capital

Although social capital has become an important concept in the literature on academic achievement, there is not a good deal of consensus on its definition. There are now two ways of defining social capital, each having to do with social networks in some way. Portes (1998), Lin (2000), Paxton (1999), and Burt (1992) all define social capital as the resources that one can receive by being a member of a social network; thus these

others are the sources of one's social capital. Coleman (1988) coined the term social capital and defined it by its function because it allows people to achieve certain things, which without which they would not be able. Just knowing someone knows something is not enough to get the information (Cross and Borgatti, 2004). The relationship needs to be "activated"- contacts need to be used to transfer other sorts of resources, such as job openings (Smith, 2005). However, Putnam (2000) defines social capital differently, focusing instead on measuring social networks, rather than the resources that flow through them. Thus, social capital has been defined both as the social networks to which one is connected and the resources that flow through these networks.

Children are able to get benefits from their parents' social capital (Putnam, 2000). In order for this to happen, there needs to be a strong relationship between parents and the child (Coleman, 1988). Both Portes (1998) and Coleman (1988) agree that the amount of social capital a child can receive depends on how many parents and children are in the family. This can be seen in the fact that Israel et al. (2001) discovered that the more siblings a person has the worse their academic achievement. Coleman (1988) also believes that intergenerational closure, or parents being friends with their child's friends' parents, is necessary. Dika and Singh (2002) believe that a better way to measure social capital may be parental involvement and school engagement compared to the number of parents and parent-child discussions. Morrow (1999) points out that looking at parents' social capital influences on children's schooling focuses too much on the parents' influence and ignores the child's autonomy and the physical environment of the school. Social capital seems to have a lasting effect in school because one study found that at

Wesleyan and Yale, secret society members had gone to private high schools (Zweigenhaft, 1993).

Parental Involvement in School

The majority of studies on social capital in school have to do with the pre-college years, which can be measured through parental involvement. Parents become involved for four reasons: how they see their role in their child's life, the feeling they get from helping their child succeed in school, the invitations from the school, and the demands and opportunities the school gives them (Hoover-Dempsey and Sandler, 1997). While Grolnick and Slowiaczek (1994) found that mothers were more likely to be involved, Navarro (2008) uncovered that fathers were more likely to attend sports games, know what classes the kid was taking, and discuss future plans for college and university than mothers. Even though parents may be involved, the effects of social capital are only for people who have the resources to share with their children (McNeal, 1999). This may be why Navarro (2008) and Fass and Tubman (2002) found no relationship between a child's GPA and parental involvement and Kusterer (2009) found a negative relationship. The negative relationship could also be caused by the student feeling overly stressed because of their parents involvement (Lareau, 1989). Some point to the type of involvement from parents as the key factor influencing students' grades. McNeal (1999) discovered that parent-child discussions improve achievement. Grolnick and Slowiaczek (1994) found that both mothers and fathers going to the school and mothers exposing the child to books and current events influences the child's grades.

Some studies looked at parental involvement in college. Only a couple of the following studies related involvement to social capital. Pang (2009) discovered that

parental involvement is not correlated with academic performance. Moore (2009) found that students who had GPAs above the mean were more likely to have involved parents. On the other hand, Shoup et al. (2009) found that students that had involved parents enjoyed the school experience more and were more highly engaged, but had lower GPAs. Perhaps these parents were not involved in the right way. Parents who talked to their children about academics were more likely to have the goals of gaining skills and having higher grades (Lindt, 2010). Just talking about the academics may not be enough. Students who have parents who believe in their ability and share their interests and concerns are more likely to do better in college (Cutrona et al., 1994). This is similar to Moore (2009) that discovered that students with higher GPAs had parents who motivated, rewarded, and encouraged them. Pushing students too much may have negative affects. One study found that mothers urging their children to continue education beyond high school was negatively related to GPA; this may be because they were weak students whose mothers pushed them too hard to go to college (Hartman, 2009). According to Moore (2009), parents become involved for a variety of reasons. The study found that parents with more income, parents who had students below the mean age, and parents with college degrees were more likely to be involved.

The other way to measure social capital in schools is intergenerational closure. The following studies looked at pre-college education. Carbonaro (1998) found that this had a positive affect on math achievement, but is not associated with GPA. Bankston and Zhou (2002) disagree finding that intergeneration closure is associated with a strong academic performance. It may be that students with low level of closure engage in more deviant behavior, which causes them to have lower achievement (Carbonaro, 1998).

Control Variables

Socio-economic status influences on school

People with a higher socio-economic status (SES) receive certain benefits in school. Portes (2000) found the SES matters more than social capital when predicting a student's GPA. Stanfiel (1973) found that high and low income students have similar GPAs, while the middle group had much lower, a possible result of not having SES handicaps or being around people who have succeeded academically. Differences in SES have a larger impact during higher levels of schooling (Hansen et al., 2006).

SES even influences social capital. McNeal (1999) found that parental involvement was more effective for higher SES students. This may be because middle class parents feel more comfortable in school settings and want to be involved compared to lower class parents who need to be begged to be involved (Lareau, 1989). Also, parents with more income are more likely to discuss school activities (Sandefur et al., 1999). Middle class parents use their networks to get their children into school programs, like a gifted or special needs program, while working class parents rely on the school to decide what is best for their child (Horvat et al., 2003). The higher SES parents have the more likely they are to know more of their children's friends gaining intergenerational closure (Sandefur et al., 1999). Finally, people with higher SES are more likely to stay in college (Stanfiel, 1973).

Racial Differences in School

A student's race can impact the amount of success his/she is able to achieve in school. One study found that African Americans and Hispanics had lower grades compared to whites and Asians (Israel et al., 2001). Asians and whites do better with

increased parental control, while blacks and Hispanics do better with general discussions about schools (Kao, 2004). Parental involvement is most effective for white students (McNeal, 1999). However, Navarro (2008) found that Latino parents were more involved than non-Latino parents. It might not be as affective though for Latinos because even though Latino parents might emphasize the importance of education; Ceballo (2004) found that the parents were unable to help their child with the work. Similarly, blacks have a better relationship with their parents and get more assistance than whites, but black parents may have less to share compared to white parents (Lye, 1996). Thomas (2006) found that blacks whose parents had more education who were more involved in the school were more likely to be high achieving students. However, in general black and Latino students are less likely to graduate college with honors (Martin, 2009). Asian students just needed parents who had expectations or aspirations for high academic performance to do well academically (Chen, 2010), even if Asian Americans have the lowest level of attachment to parents (Fass and Tubman, 2002). Regardless of all of this, blacks, Hispanics, and Asian/pacific islanders are more likely to continue schooling than white students (Sandefur et al., 1999).

Analysis of the Previous Research

The previous research does a good job at looking at different aspects in the parent/child relationship and how that influences school. There has been a lot of research done on attachment between parents and children; however, most is found in the psychological literature. Sociologists have spent time looking at the type of help parents and children give each other throughout the life course. Parental divorce can complicate things more, especially the relationship between fathers and children. The family can be

considered a solid base for people and how they learn to interact with the world.

Knowing what type of relationships people have with their parents is important because it shows what type of access students have to their parents and the resources they can provide while the child is in school. The majority of this research points to the fact that women are in charge of kin keeping, making the relationship between daughters and mothers the strongest. It is likely that girls will benefit more from any relationship with parents than boys, partly because they are more likely to try to maintain that relationship.

There has also been a lot of previous research that looks at college. For instance, people have studied who is likely to attend college. The type of community a person is from, how much money the family has, how often the family moves, and actions parents take all affect this. It also seems that the money parents have affects if they pay or not for college. This can then influence the students' outcomes. Previous research shows that parents are important for their children just getting to college. Also, it means that only a certain type of person attends college making them different than people from the larger population. Students in college may already have parents that have certain characteristics that will help them while in college.

Previous educational and sociological research has focused more on the first-year experience, in particular the adjustment to college, compared to any of the other college years. Studies have found that parents are an important part of this transition. In general these studies found that the more attached students are the better adjusted to college students become and the better their grades. By only focusing on the affect that parents can have on the first-year experience, studies are ignoring the influence parents may have on the rest of college. While a small amount of studies have looked at the involvement of

parents in college, psychologists, not sociologists, have mostly conducted these studies. The majority of these studies ignored social capital, which may be an important tool to help analyze the parent/child relationship in college.

Previous research shows that there are two ways of viewing social capital. One is a measure of the amount of network connections someone has while the other focuses on the resources that flow through the social networks. I assume the latter because that is how social capital is utilized in most education research. Coleman (1988), who first defined social capital and related it to education, believes that parental involvement and intergenerational closure can be used to measure social capital from parents in schools. Many sociologists have used this framework to study pre-college students' academic achievement. There is a gap in the research in the fact that this has not been used to study college students. Previous research points to the fact that students with higher SES and whites are more likely to do better in college. These students most likely have more resources that they can obtain from their parents. Of course, the relationship needs to be activated, which is why it is important to know that college students and their parents have a close relationship and are remaining in contact while the student is away at school.

It is important to look at social capital in regards to the influence parents have on college students' grades. According to Arnett (2000), there is now a new life stage, which he calls emerging adulthood. In this phase, people are exploring their ideas of the world, which is done because there is most likely less parental involvement in their lives. For college students, this can happen with the change in relationship that occurs when they move away from home. Previous research shows that parents give students more autonomy and support when they move away compared to when they remain at home

during college. However, research also shows that parents, who pay college tuition, expect more from the college. Some of these parents even contacted professors about their students' grades. It is possible that these parents may remain involved in college, just like they did in their children's previous years of schooling. By staying involved parents will be able to share their social capital resources with their children. This may be beneficial for students; however, too much of it may stop students from trying hard in college because they may think their parents can fix everything. It is possible that college is a place where there needs to be a balance in the amount of parental involvement. Perhaps college students need a certain amount of parental involvement to do well in school; however, after a certain point too much actually harms the students' academic achievement. College students may need to learn how to rely on their own social capital instead of their parents' social capital.

METHODOLOGY

After reviewing the previous literature one overall research question comes apparent, which is: What influence does parental involvement have on college students' grades? I formed four hypotheses based off of previous literature:

1. Some parental involvement will be beneficial to students; however, it will reach a point, which will actually be harmful to the students' GPA. This may be an indirect effect on GPA.
2. Non-academic involvement will matter more for female students than male students.
3. Freshmen will be more likely to get academic help from parents because they will not be as specialized.
4. The better students' academic behaviors, which may in part be influenced by how they were raised, the better their GPA.

Quantitative analysis was used in order to test my hypotheses. I fielded a survey to undergraduate students at Lehigh University through a Google document, specifically a Google form (see Appendix A). The population and study population of the research is the Lehigh University undergraduate community. All members of the Lehigh undergraduate community were included in the sample. This made it so that everyone in the population had an equal chance of being selected since everyone had access to the survey. A link to take the survey was posted in the Lehigh University daily announcements. Flyers with information and a link to the survey were posted in strategic locations on campus, such as the University Center, the two libraries, the gym, and

different academic buildings. In order to give people an incentive to take the survey, the 150th person to take the survey won a \$25 gift card to Amazon.com.

Many steps were taken to keep the students from harm. Before taking the survey, students had to give informed consent. In this form subjects learned not only their rights as a participant, such as the ability to not answer any question, but also any risks they might encounter by taking this survey. One of these risks is that there is the possibility of a breach of confidentiality; however, that should be taken care of with the following procedures. The data remained anonymous and confidential. Students were not asked to attach their name to the survey. Also, they had to go to another Google form to submit their e-mail in case they were the 150th person to take the survey. There was also the possibility of an emotional risk if students have a strained relationship with their parents. Because of this, students were provided with the number of the counseling center. After people took the survey the data was entered into SPSS (statistical package for the social sciences). My computer, where the information was stored, was locked so that no one else would have access to the data.

Before engaging in the study it was put before Lehigh University's Institutional Review Board to receive human subjects approval. The board received information on how subjects would be recruited and how the data and subjects would be protected from harm. On November 13, 2012 the study was given exempt status meaning the study had approval to proceed because it was exempt from continuing IRB review. It fell under exempt category 2 because it involves survey procedures where subjects cannot be identified and there will be no damage to the subjects' financial standing, employability, or reputation. The IRB reference number is 13/048.

My sample is self-selected and not representative of the Lehigh University undergraduate student body. It consisted of 172 participants. Lehigh University has 4,718 undergraduate students, which means I had a response rate of 3.65%. Females made up 73.8% of the participants. Freshmen were the modal category of participants with 40% of the sample. Sophomores made up 21.8%, juniors made up 20%, and seniors made up the last 18.2% of the sample. While there were only 11.6% of the participants from the College of Business and Economics, participants from the College of Engineering and Applied Science made up 39% of the participants, and students from the College of Arts and Science made up the remaining 49.4%. The majority of the participants (78.9%) had parents who were married. About 50% of the participants had at least one parent with a Bachelor's degree making them at least middle class. This study can really only apply to the people in my sample since it is not representative of the larger population of Lehigh University.

In order to determine if my hypotheses can be rejected or accepted, I ran a series of statistical tests. First I ran descriptive statistics to get a basic understanding of my sample. I then used simple t-tests to see if any of the differences I found in the descriptive statistics were statistically different. Finally, I created a structural equation model to discover the relationship between my exogenous and endogenous variables.

Structural equation modeling (SEM) is the best method to discover the relationship between my variables. While SEM is an extension of multiple regression, it allows for a better analysis of effects. SEM allows for both indirect and direct effects on variables (Austin and McKinney, 2012). I hypothesize that parental involvement (as a representation of social capital) has an indirect effect on GPA, which I would not be able

to discover with multiple regression. Another advantage is that it allows for latent variables in the model that are comprised of multiple variables and supported by confirmatory factor analysis (Austin and McKinney, 2012). This means highly correlated variables can be added into the model with unbiased coefficients. SEM also takes into account measurement error (Austin and McKinney, 2012), which will reduce any bias in the data created by the fact that only one person created the survey. Finally, it estimates values for missing values instead of excluding those cases from the analysis. My endogenous variable of cumulative GPA has missing data and SEM will allow for this data to remain in the study. The model was estimated using the SPSS Statistics program, AMOS.

Exogenous Variable

My main exogenous variable is social capital from parents, which is the resources that flow through social networks. Many people who use this idea in educational research measure it through parental involvement. I have split this into three categories: academic, institutional, and personal. Questions were placed in these different categories based on type. I decided to split involvement up into these three categories because a parent may be involved in one aspect of the child's school life, but not another. All of these questions were based on the students' perception of the relationship with their parents.

Academic involvement has measures such as parents asking after schoolwork, asking for help on an assignment, talking to the parent about academic issues, and the type of grades the student shares with parents. Parents asking about schoolwork, asking for help on assignment, and talking to a parent about an academic issue were combined as a measure of parental academic involvement for some of the basic analysis including t-

tests, chi-squares and regression. When combined these three variables were added together into a scale with three representing these activities never happening and eighteen representing the activities all happening daily.

Under the category of institutional involvement are measures of if parents have contacted either a professor or an administrator about the students' grades. Because so few people had their parent contact a professor or an administrator this category was not included in any of the analyses. Personal involvement includes questions about parents' involvement in students' personal life while they are in school. This includes questions about talking to parents about extracurricular activities, family topics, friends, and personal issues. Confirmatory factor analysis in the structural equation model showed that talking to parents about family, friends, and personal topics all were indicators of one latent variable, which I named non-academic parental contact. When combined for OLS regression analysis these three variables were added together into a scale with three representing these activities never happening and eighteen representing the activities all happening daily. Talking to parents about extracurricular activities was excluded from the analysis.

Another category of independent variables has to do with students' academic behaviors. This includes measures of completing homework, going to professors' office hours and seeing professors outside of office hours, participating in class discussions, going to class, and meeting with the teaching assistant. Because the majority of students only went to professor's office hours, saw them outside of office hours, and met with teaching assistants around once a month these measures were not included in the structural equation model. In the OLS regression analysis the measures of completing

homework, participating in class discussion, and going to class were combined based off of exploratory factor analysis. The scale was created by adding all the items up. This means that someone with a three had the worst work ethic because they never did any of the above activities and someone with an eighteen had the best work ethic because on a daily basis they did the above activities. Confirmatory factor analysis in the SEM model showed that these variables do not actually represent a latent variable.

Endogenous Variables

I have one main endogenous variable, grades, which was simply measured as the students' cumulative grade point average. Students were asked to report their cumulative grade point average. While freshmen did not have a cumulative GPA many put what they thought their GPA would be. This variable was left as a continuous variable.

Control Variables

In order to see if there is an actual relationship between my main exogenous and endogenous variables I considered other variables. These are the students' gender, class year, academic college at Lehigh University, distance from home, social class, parents' relationship status, amount of siblings, closeness to a parent, talking to one parent more than the other, how often parents visit the student at school, and the primary mode of communication with a parent. A regression with GPA as the dependent variable was run with all of these variables to see which had an influence on GPA (Appendix B).

Gender

The gender variable is the sex a person believes that he/she is. This variable was not recoded in any way. The variable is included as a control variable because not only is it a normal variable to control for, but it is also needed for one of my hypotheses. I

believe that girls benefit more from personal involvement and boys benefit more from academic involvement. Because this variable significantly predicted GPA, it was included in the structural equation model.

Class Year

Class year is another control variable. This is whether a person is a freshman, sophomore, junior, or senior. Class year significantly predicted GPA in the control variable regression. This variable was not recorded for the structural equation model, but was made into 3 binaries for some of the OLS regression analysis comparing each year to freshman. It was also included because parental involvement might matter differently depending on a person's class year; however, according to the literature it does not.

Academic College at Lehigh University

This is whether the student is a member of the College of Arts and Sciences, the College of Business and Economics, or in the College of Engineering and Applied Science. This variable was recoded into two binary variables each compared to students in the College of Arts and Sciences. This variable was included as a control variable because students in each academic college might in some way be different and that makes it important to control for. The variable was not included in the SEM because the majority of the students who completed the survey were from the College of Arts and Sciences.

Distance from Home

The distance a student's childhood home is from the university is also a control variable. This is if the student's home is under two hours, between two or six hours away, six or more hours, or if the student is international. This variable was not recoded. It is

possible that parents have less of an influence on their children, the further they are from home. This variable was not included in the structural equation model because it did not significantly predict GPA.

Social Class

Social class is the position one holds in society. This is measured for students by the amount of education a parent receives allowing them and their children to be in a certain social category in society. I asked students to report the highest level of education received by either one of their parents. This is included as a control variable because parents in different social classes may view their position in their children's college life differently. Also, students of different social classes already have different backgrounds that can affect their GPAs and academic behaviors. The variable was not included in the structural equation model because it did not significantly predict GPA.

Parent's Relationship Status

This is the basic relationship between a student's two parents. It helps determine if a student's parents are married, cohabiting, separated, divorced, widowed, single, or something else. In order to see the difference between people with a "traditional" family and a broken up family, I created two categories one with married parents and one without married parents. This was included as a control variable because the literature showed that students with two parents had more advantages than students in different family structures. However, it was not included in the structural equation model because it did not significantly predict GPA.

Amount of Siblings

This is a measure of the amount of siblings a person has. This was not recoded. This variable was included because the previous literature showed that the more siblings a person had the less effective social capital was for the student. It was not included in the structural equation model because it did not significantly predict GPA.

Closeness to a Parent

This is a measure to see if a student feels close to at least one of his/her parents. This was not recoded. This variable was included because it is possible social capital only affects students' academics if the students feel close to their parent. This variable was not included in the structural equation model because it did not significantly predict GPA.

Talking to One Parent More Than the Other

This is a measure to see if a student talks to a female parent more, a male parent more, or talks to each parent the same. The variable was recoded to compare talking to a mother more (the modal category), with talking to a father more or talking to neither parent more. This is included to see if parental gender has an influence on the relationship between social capital and students' academics. This was not included in the structural equation model because it did not significantly predict GPA.

How Often Parents Visit Student at School

This variable looks at how often a student's parents visit him/her at school. It looks to see if parents never visited or if they visited less than once a month to once a month, two or three times a month, once or twice a week, more than twice a week, or daily. The variable was not recoded. It was not included in the structural equation model because it does not significantly predict GPA.

Primary Mode of Communication with Parent

This variable explores if students' primary way of communicating with their parents is e-mail, texting, phone conversations, video chatting, talking in person, or something else. This variable was included because the type of contact the student has with his/her parents may affect the transmission of social capital and its effect on his/her academics. Because the modal category was phone conversation, the variable was recoded to compare that category with all others combined into not phone conversations. This variable was not included in the structural equation model because it did not significantly predict GPA.

I considered all of the above variables when creating my structural equation model. I only included the ones that had a significant impact on GPA to maintain simplicity in the model. I did control for them in my OLS regression analyses. If I did not control for them I would be unable to say if it was some other factor related to my participants' backgrounds that was affecting their GPAs and academic behavior that had nothing to do with their parents' involvement in their lives.

RESULTS

In order to test my hypotheses a series of statistical analyses were conducted. First, frequencies of the key variables were run. Next graphs combining multiple variables were created to see what the relationship between the variables looked like. T-tests and chi-square tests were conducted to see if the relationships seen in the graphs were statistically different. Multiple regressions were then run to get a better understanding of the data. Finally, a structural equation model was created to understand the direct and indirect relationships between the variables.

Univariate Analysis

The variables included in this analysis are sex, class year, how often the student goes to class, how many times a week a student completes their homework, how many times a week a student participates in class discussions, how often a student talks to a parent about family topics, personal topics, and friends topics, how often parents ask about schoolwork, how often a parent helps with an academic issue, how often a parent helps with an academic assignment, and the student's cumulative GPA. The majority of students (90.7%) reported going to class on a daily basis. The majority of students (64%) also reported completing their homework on a daily basis. While 20.9% of students participated in class discussion on a daily basis, 22.1% participated more than twice a week, 29.7% participated once or twice a week, 15.1% participated two or three times a month, 8.1% participated less than once a month, and 4.1% participated never. While 0.6% of students reported never talking to at least one parent about family topics, 11% said daily conversations, and 63% fit into either two or three times a month or once or twice a week. Students seem to rarely talk to at least one parent about personal topics

with the modal category being less than once a month with 36.6%. The modal category (33.7%) for talking to at least one parent about friends topics is two or three times a month. There is variety in how often a parent asks about schoolwork. While the modal category is never with 24.4% of students reporting that category, 7% said daily, 8.7% said more than twice a week, 18.6% reported once or twice a week, 21.5% said two or three times a month, and 19.8% said less than once a month. 72.6% of students reported their parent helping them with an academic issue less than once a month or never. The majority of people (68.6%) said they never had a parent help with an academic assignment. Students reported cumulative GPA has a mean of 3.3 with a standard deviation of 0.44. Those are some basic descriptions of the variables being used in this analysis.

Bivariate Analysis

Graphs were created in order to see how some of the variables interact with the two independent variables of sex and class year. As seen in Figure 1, juniors and seniors are the most likely to never have their parents ask about schoolwork, followed closely by sophomores. Most freshmen do not have their parents never ask about schoolwork. On the other side of the spectrum, sophomores are the most likely to have their parents ask more than twice a week or daily. A chi-square test of this relationship was not significant, which means these are not statistically significant differences.

Figure 1

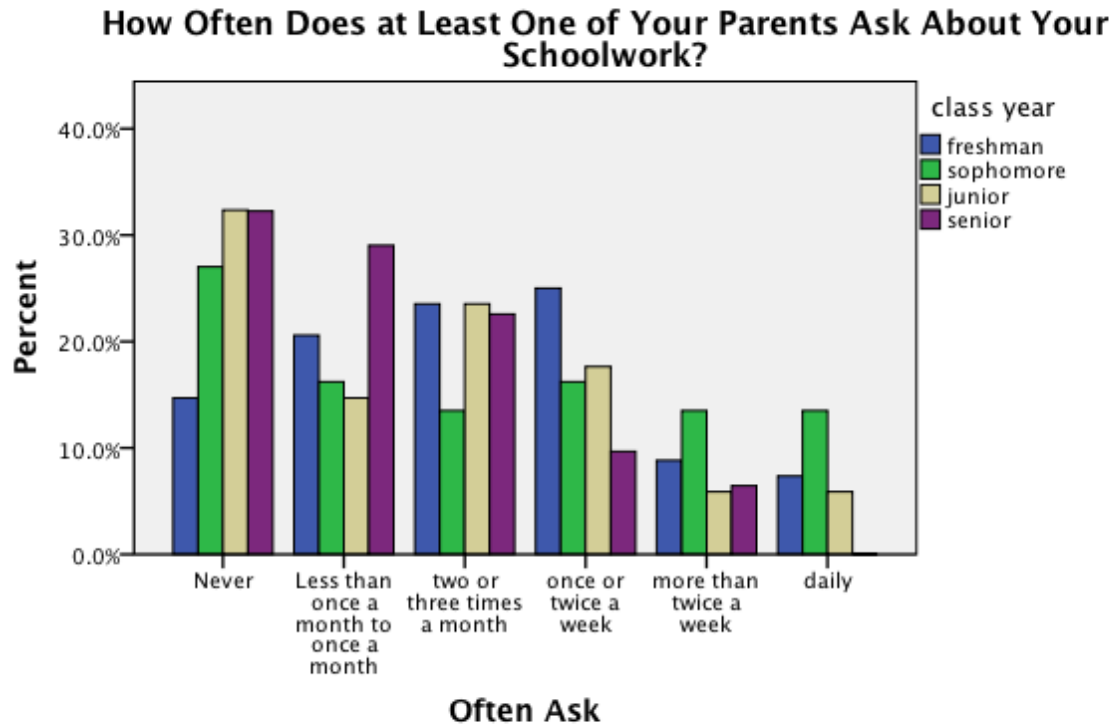


Figure 2 shows the relationship between class year and how often at least one parent helps his/her child with an academic issue. Parents seem to help their children with an academic issue less than once a month to once a month; this is extremely true for seniors. In order to see if there is a significant relationship between getting help with an academic issue and class year, a chi-square test was done. Because of a small cell issue both variables were made into a binary. Getting help with an academic issue is separated into once a month or less and two times a month or more. Class year is separated into

freshmen versus upperclassmen. While 80.4% of upperclassmen reported getting help once a month or less, 60.3% of freshmen reported getting help that often. This is a statistically significant relationship (*Pearson Chi-Square*=8.24 (1), $p=.004$). This means that freshmen are more likely to get help with an academic issue than upperclassmen.

Figure 2

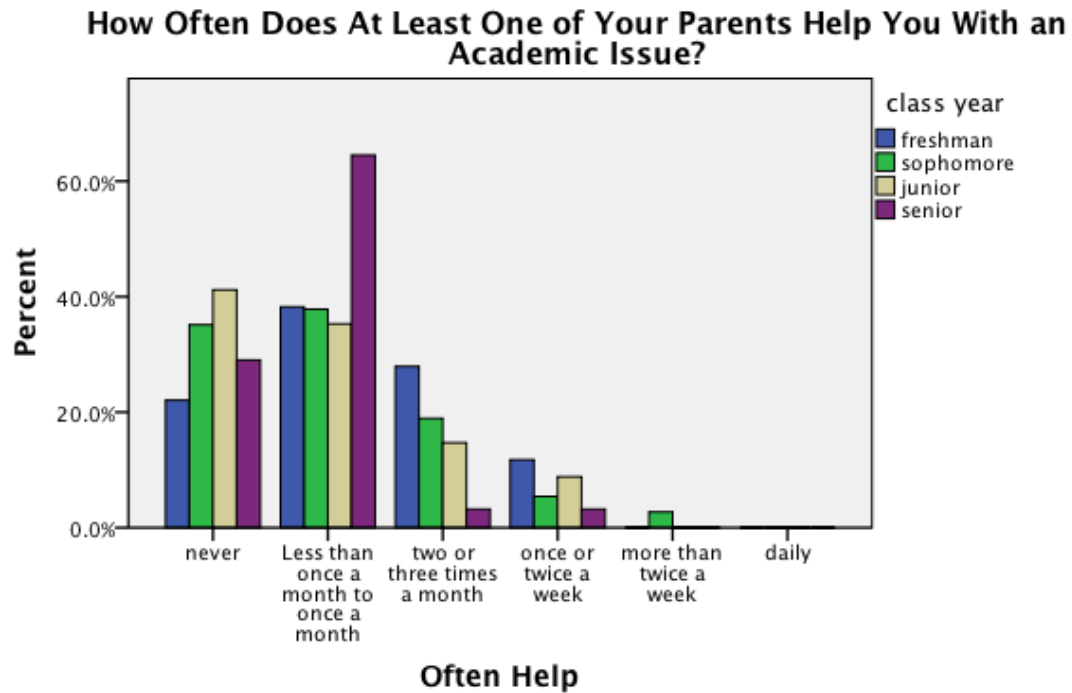


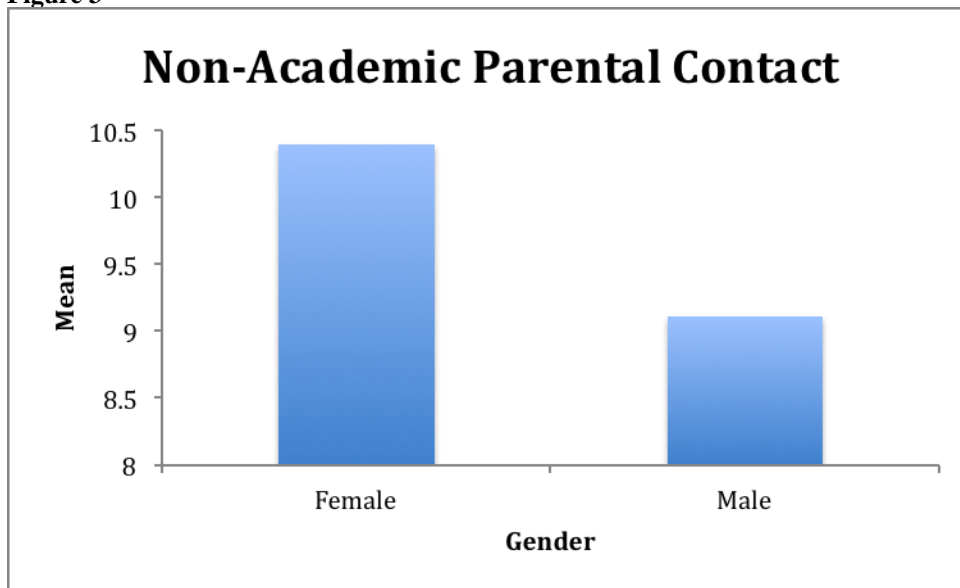
Table 1: Chi-Square Test of Class Year on Getting Help with an Academic Issue

	Once a month or less	Two times a month or more	Total
Freshmen	60.3%	39.7%	100%
Upperclassmen	80.4%	19.6%	100%
Total	72.4%	27.6%	100%

Pearson Chi-Square= 8.24 (1); $p=.004$

Non-Academic parental contact is made up of three other variables. These are talking to a parent about personal issues, family issues, and friends issues. As seen in figure 3, females have more non-academic parental contact than males. In order to test the relationship a t-test was run. Because Levene's test is not significant, I can assume equal variance. There is a significant difference between females (10.39) and males (9.11) and the amount of non-academic parental contact they receive ($t= (169) 2.45$, $p=.015$). On average females have 1.28 more non-academic contact than males.

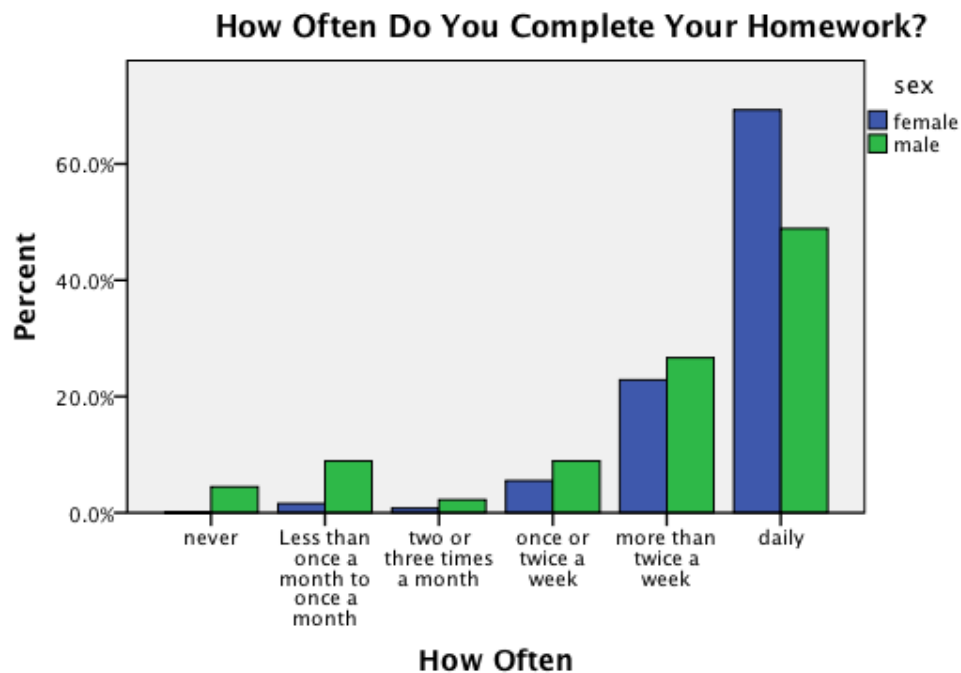
Figure 3



The relationship between gender and how often a student reports completing their homework was also analyzed. Figure 4 shows the relationship. Both females and males

complete their homework on a daily basis, but a larger percentage of females say daily. A t-test was run to see if this was a statistically significant relationship. Because Levene's test is significant I cannot assume equal variance. There is still a significant difference between females ($m=5.57$) and males (4.91) ($t(52.6) = 2.86, p=.006$). On average females complete their homework .66 more often than males.

Figure 4



Along with looking at the relationship between genders and completing homework, the relationship was looked at by class year as seen in Figure 5. The majority of students report that they complete their homework on a daily basis. A similar amount

of students say that they complete their homework more than twice a week and daily. In order to see if there is a significant relationship between these variables a chi-square test was complete. Because students should most likely be doing homework on a daily basis the analysis was completed comparing doing homework on a daily basis to not completing homework on a daily basis as seen in Table 2. Freshmen, sophomores, and juniors are more likely to do their homework daily. Seniors are more likely to not do their homework daily. This is a statistically significant relationship (*Pearson Chi-Square*=10.95 (3), $p=.012$), which means there is a significant difference.

Figure 5

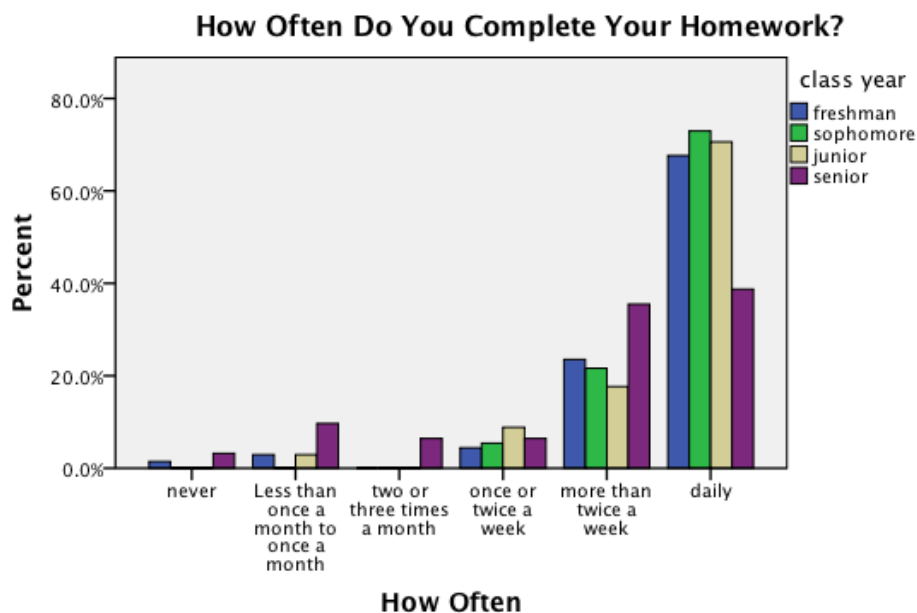


Table 2: Chi-Square Test of Class Year on Doing Homework Daily or Not

	Not Daily	Daily	Total
Freshman	32.4%	67.6%	100%
Sophomore	27%	73%	100%
Junior	29.4%	70.6%	100%
Senior	61.3%	38.7%	100%
Total	35.9%	64.1%	100%

Pearson Chi-Square= 10.95 (3); $p=.012$

The last bivariate analysis that was conducted was the relationship between class year and mean cumulative GPA. As seen in Figure 6, freshmen report having the highest GPA, followed by sophomores, juniors and then finally seniors. Because the data violated Levene's test for homogeneity of variance for ANOVA, a chi-square test was run with high (3.39 and above) and low (2.0-3.38) GPA as seen in Table 3. Juniors and seniors are more likely to have a lower GPA, while freshmen and sophomores are more likely to have a higher GPA. This is a statistically significant difference (*Pearson's Chi-Square*=7.85 (3), $p=.049$).

Figure 6

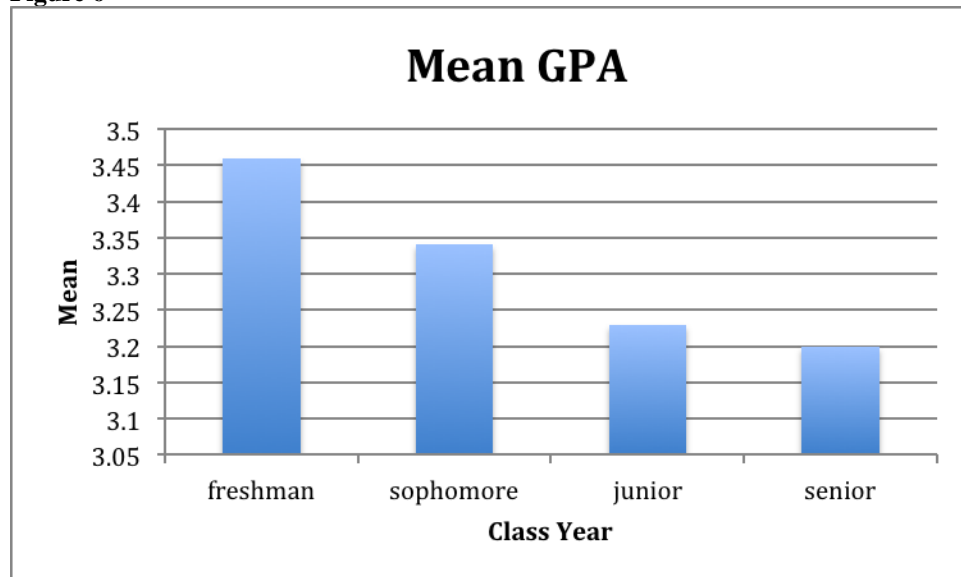


Table 3: Chi-Square Test of Class Year on GPA

	2.0- 3.38	3.39-4.0	Total
Freshman	36.1%	63.9%	100%
Sophomore	40.5%	59.5%	100%
Junior	60.6%	39.4%	100%
Senior	64.3%	35.7%	100%
Total	49.3%	50.7%	100%

Pearson Chi-Square= 7.85 (3); $p=.049$

Multivariate Analysis

Ordinary Least Squares regression analysis was conducted to see if there was a relationship between the main variables. This is done while controlling for other basic variables, such as gender, class year, the college the student belongs to, how many hours they live from home, the highest education level of a parent as a representative of socioeconomic status, if the students parents were married or not, how many siblings they have, if they are close or not with at least one parent, if they talk to a female parent more compared to talking to parents the same or a male parent more, if their primary mode of communication is a phone or not, and how often the parent visits the school. In total ten regressions were analyzed.

The first set of regressions looks at if students' work ethic predicts their cumulative GPA and if this changes by gender and if they are a freshmen or upperclassmen. This is made up of going to class, how often the student completes their homework, and how often the student participates in class discussion. These variables were combined because of the results of an exploratory factor analysis. The scale was created by adding all the items up. This means that someone with a three had the worst work ethic because they never did any of the above activities and someone with an eighteen had the best work ethic because on a daily basis they did the above activities.

The regression for the full sample is statistically significant ($F(14, 114) = 1.835, p = .041$) and explains 23% of the variance in cumulative GPA ($r^2 = .23$). Even when controlling for the other variables work ethic ($p < .01$), gender ($p < .01$), being a junior ($p < .05$), being a senior ($p < .05$), and being a student in the engineering college ($p < .05$) are all significant. Work ethic has the strongest influence on cumulative GPA ($\beta = .291$), followed by being a junior ($\beta = -.278$), gender ($\beta = .238$), being a senior ($\beta = -.217$), and being in the college of engineering ($\beta = .206$).

The majority of the relationships remain significant just for females ($F(14, 83) = 2.43, p = .007$) and explains 29% of the variance in cumulative GPA ($r^2 = .29$). While controlling for other variables, work ethic ($p < .01$), being a junior ($p < .05$), being in the college of engineering ($p < .01$), and parents' SES ($p < .05$) become significant predictors of cumulative GPA. Being in the college of engineering ($\beta = -.279$) has the strongest influence on cumulative GPA, followed by work ethic ($\beta = .277$), being a junior ($\beta = -.263$), and finally parents' SES ($\beta = .215$). The regression just for males was not statistically significant, which means work ethic really only has an influence on cumulative GPA for females.

The regression for freshmen is statistically significant ($F(12, 20) = 2.386, p = .041$) and explains 59% of the variance in cumulative GPA ($r^2 = .59$). Controlling for other variables, the only significant predictor is gender ($\beta = .557, p < .01$). This means that for freshmen their work ethic does not matter in predicting their GPA, but that their gender is the only important factor. Among freshmen, males are more likely to have a better GPA than females. The regression for upperclassmen is also statistically significant ($F(12, 83) = 2.782, p = .003$) and explains 29% of the variance in

cumulative GPA ($r\text{-squared}=.29$). Controlling for other variables, work ethic ($p<.001$) is a significant predictor of cumulative GPA; the number of siblings a student has ($p<.05$) is significant as well. A students' work ethic ($\beta=.377$) has a stronger influence on their cumulative GPA than the amount of siblings they have ($\beta=.209$).

Table 4: Regression on GPA with Work Ethic Variable

	Full Sample	Females	Males	Freshmen	Upperclassmen
work ethic	.291**	.277**	NS regression	0.154	.377***
sex (male)	.238**			.557**	0.17
class (sophomore)	-0.112	-0.09			
class (junior)	-.278*	-.263*			
class (senior)	-.217*	-0.136			
college (business)	-0.133	-0.133		-0.35	-0.095
college (engineering)	-.206*	-0.279**		0.088	-0.206
hours away from home	-0.04	-0.17		-0.084	-0.022
highest level ed of parent relationship of parents (not married)	0.122	0.215*		0.008	0.091
	-0.066	-0.107		-0.008	-0.133
number of siblings	0.094	0.182		0.282	.209*
close (no)	0.006	0.059		0.256	0.076
talk to female parent vs others	-0.042	0.013		-0.064	-0.048
communication (not phone)	0.039	0.011		-0.304	0.154
visit the school	0.008	0.031		-0.664	0.078
r squared	0.23	0.29		0.59	0.28

$p<.05$ * $p<.01$ ** $p<.001$ ***

Cells are betas

As seen in Table 5, a series of regressions were run to see if non-academic parental involvement (talking to at least one parent about family topics, friends topics, and personal issues) had any influence on academic parental involvement (a parent helping with an academic issue, a parent helping with an academic assignment, and how often a parent asks if their child is doing their schoolwork) while controlling for other relevant variables. Both the dependent variable and independent variables were created using

exploratory factor analysis. In each of these adding up the variables created the scales. Someone with a three had the lowest score on the scale and someone with an eighteen had the highest score on the scale. The non-academic parental involvement variable was proved to be a latent variable through confirmatory factor analysis in the structural equation model. The regression for the full sample is statistically significant ($F(15, 149) = 5.97, p < .001$) and explains 38% of the variance in academic parental involvement ($r^2 = .38$). While controlling for other variables, non-academic involvement ($p < .001$), being a senior ($p < .01$), hours away from home ($p < .01$), and talking on a phone or not ($p < .01$) all statistically predict academic parental involvement. Non-academic parental involvement ($\beta = .379$) has the strongest influence on academic parental involvement, followed by being a senior ($\beta = -.253$), talking on a phone or not ($\beta = .210$), and finally hours away from home ($\beta = -.208$).

There is an interesting relationship between non-academic parental involvement and academic parental involvement when comparing just females and just males. The regression just for females is statistically significant ($F(14, 107) = 4.94, p < .001$) and explains 39% of the variance in academic parental involvement ($r^2 = .39$). When controlling for other variables, non-academic parental involvement ($p < .001$), being a senior ($p < .01$), and talking on the phone or not ($p < .001$) are all significant predictors. Non-academic parental involvement ($\beta = .342$) is the strongest predictor, followed by talking on the phone or not ($\beta = .320$), and finally being a senior ($\beta = -.280$). The regression for males is also statistically significant ($F(14, 28) = 3.553, p = .002$) and explains 64% of the variance in academic parental involvement ($r^2 = .64$). While controlling for other variables, both non-academic parental involvement ($p < .01$) and

being a junior ($p < .05$) are statistically significant predictors of academic parental involvement. Non-academic involvement ($\beta = .429$) is a stronger predictor than being a junior ($\beta = -.280$). Non-academic parental involvement is more important for males than for females when predicting how much academic parental involvement they receive.

Non-academic parental involvement is also more important for freshmen than for upperclassmen when predicting how much academic parental involvement they receive. The regression for freshmen is statistically significant ($F(12, 52) = 4.329$, $p < .001$) and explains 50% of the variance in academic parental involvement ($r^2 = .50$). While controlling for other variables, non-academic parental involvement ($p < .01$), SES ($\beta = -.322$), and talking to a female parent more ($p < .05$) are all statistically significant predictors of academic parental involvement. Non-academic parental involvement ($\beta = .424$) has the strongest influence on academic parental involvement followed by SES ($\beta = -.322$), and finally talking to a female parent more ($\beta = .236$). The regression for upperclassmen is also statistically significant ($F(12, 87) = 4.128$, $p < .001$) and explains 36% of the variance in academic parental involvement ($r^2 = .36$). While controlling for other variables, non-academic parental involvement ($p < .01$), hours away from home ($p < .05$), talking to a female parent more ($p < .05$), and talking on the phone or not ($p < .05$) are all statistically significant predictors of academic parental involvement. Non-academic parental involvement is the strongest predictor ($\beta = .340$) of parental academic involvement, followed by talking on the phone or not ($\beta = .238$), hours away from home ($\beta = -.230$), and finally talking to a female parent more ($\beta = -.211$). There is a difference between freshmen and upperclassmen in the influence that non-academic parental involvement has on academic parental involvement.

Table 5: Regression on Academic Parental Involvement

	Full sample	Females	Males	Freshman	Upperclassmen
Non-academic involvement	.379***	.342***	.429**	.424**	.340**
sex (male)	-.041			-.096	-.087
class (sophomore)	-.129	-.085	-.141		
class (junior)	-.137	-.044	-.388*		
class (senior)	-.253**	-.280**	-.079		
college (business)	.015	-.051	.253	-.186	.077
college (engineering)	-.051	.024	-.074	-.066	.017
hours away from home	-.208**	-.144	-.147	-.188	-.230*
highest level ed of parent	-.102	-.126	-.153	-.322**	-.017
relationship of parents (not married)	-.034	-.06	.176	-.184	.049
number of siblings	-.083	-.129	-.003	-.153	-.069
close (no)	-.014	-.106	.147	-.065	-.012
talk to female parent vs others	-.035	-.145	.065	.236*	-.211*
communication (not phone)	.210**	.320***	.034	.218	.238*
visit the school	.016	-.002	.149	.057	.018
r squared	.38	.39	.64	.50	.36

p <.05* p<.01** p<.001***

Cells are betas

Regressions were also run to see if non-academic parental involvement and academic parental involvement had an influence on students' cumulative GPA and work ethic. None of these regressions were significant, which means that any form of parental involvement has no influence on academics. I decided to check to see if there were any indirect influences of parental involvement on cumulative GPA or work ethic by using structural equation modeling.

In order for others to reproduce the findings a correlation matrix of the variables included in the SEM are included in Table 6. Figure 7 is a representation of the model analyzed for the variables I was interested in. The model was created using both theory and model building (Byrne, 2009). In order for a model to be analyzed it first needs to

align with the model fit statistics. Unlike most statistical tests, SEMs require that the chi-square be non-significant. It also needs the RMSEA to be under .05 or .10 for small samples; the incremental, Tucker-Lewis, and condition fit indexes should be around 1 (Byrne, 2009). These statistics help to show that the model is actually explaining what is going on in the data. In the case of my model, all the statistics prove that the model fits the data (chi-square: 58.37, $df=46$, not significant; RMSEA: .04; IFI: .965; TLI: .935; CFI: .962). Because these measures show that the model fits the data, the model can be analyzed. All of the pathway coefficients are statistically significant at the .05 level.

Table 6: Correlation Matrix of Exogenous and Endogenous Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Sex	1.00											
2. Class Year	.11	1.00										
3. Ask About Schoolwork	-.03	-.21*	1.00									
4. Help with Academic Assignment	-.1	-.15	.23**	1.00								
5. Help with Academic Issue	-.19*	-.21*	.27**	.46**	1.00							
6. Family topics	-.09	.10	.28**	.11	.21**	1.00						
7. Personal Topics	-.23*	-.13	.31**	.17*	.48***	.48**	1.00					
8. Friend Topic	-.15	-.01	.31**	.14	.33***	.57**	.61**	1.00				
9. GPA	.09	-.22*	-.19*	.14	.03	.02	-.06	.02	1.00			
10. Complete HW	-.28**	-.19*	-.03	.05	.12	.12	.19*	.05	.11	1.00		
11. Go to Class	-.03	.06	-.03	.05	.08	.13	.01	.01	.04	.12*	1.00	
12. Participate in Class Discussions	-.08	-.06	.06	.14	.07	.09	.04	.02	.33	.19*	-.11	1.00

p < .05* p < .01** p < .001***

Figure 7

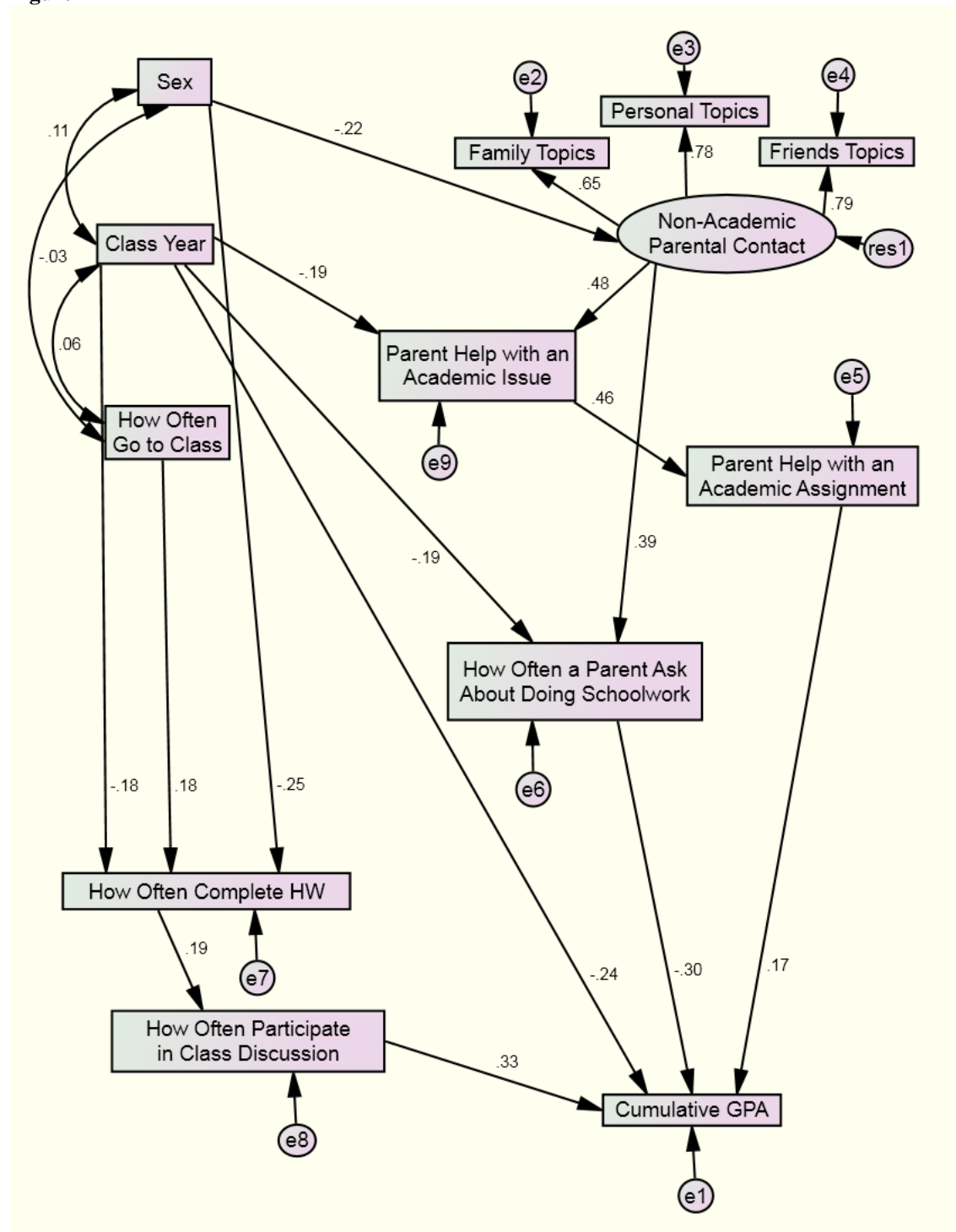


Figure 7 shows that my first hypothesis about parental involvement being both beneficial and harmful was correct. Non-Academic parental contact is positively associated with parent help with an academic issue (.48) and how often a parent asks about doing schoolwork (.39). One of these paths leads to a positive effect on GPA while the other leads to a negative effect on GPA. Parent help with an academic issue then has a strong positive influence on parent help with an academic assignment (.45), which in turn has a positive impact on cumulative GPA (.17). On the other hand, how often a parent asks about doing schoolwork has a negative impact on GPA (-.30). Females are more likely to have non-academic parental contact (-.22), thus proving hypothesis 2. Class year has a negative impact on parents helping with an academic issue (-.19), which means that freshmen are more likely to get help, which proves my third hypothesis.

Figure 7 also shows that going to class has a positive influence on how often a student completes their homework (.18), which then in turn has a positive influence on times a week the student participates in class discussion (.19). How often students participate in class discussion then has a positive influence on students' cumulative GPA (.33). This proves my fourth hypothesis. This is additionally influenced by sex and class year. Females and freshmen are more likely to complete their homework (-.25 and -.18 respectfully), which would then influence how often they participate in class discussion and then their cumulative GPA.

DISCUSSION

This research can contribute to the previous research on what factors influence college GPA, the relationship between college adjustment and GPA, and social capital from parents in school settings. My research supports Rau and Durand's (2000) claim that having the right academic ethic leads to a student having a higher college GPA. The majority of students reported participating in class discussion at least once a week, which had a direct effect on GPA. Of course it is likely that the more they participated the better their GPA. As seen in the SEM, students who went to class and because of that did their homework were more likely to participate in classroom discussion, which led to a better GPA. This progression makes sense. Students who go to class are more likely to know what the homework is and when it is due so they are more likely to complete it. By completing the homework they will be able to contribute more to the classroom discussion. Finally, by participating in classroom discussion students are more engaged in the class, which can help them understand the topic better leading to a better cumulative GPA.

The SEM shows that both going to class and how often a student completed their homework had indirect effects on GPA. The majority of students reported going to class on a daily basis, which then influenced if they did their homework on a daily basis. The amount of students who reported doing their homework on a daily basis is 26.7% less than the amount of students that reported going to class on a daily basis. This is because both sex and class year also had an influence on how often students did their homework.

As seen in the bivariate analysis there was a statistically significant difference between females and males in how often they complete their homework. It is clearly

shown in the graph that females are more likely to do their homework daily. The regression between GPA and work ethic shows that the relationship is only significant for females and not for males. In other words, work ethic only has an impact on GPA for females. The SEM showed that females are more likely to do their homework, which lead to being more likely to participate in classroom discussion and then to get a higher GPA. All of this supports Hartman (2009) who found that girls had higher GPAs.

It is also important to look at the relationship between class year and work ethic. The bivariate analysis showed that there was a statistically significant relationship between class year and doing homework daily or not daily. Unlike every other class year, the majority of seniors were more likely to not do their homework daily. It is important to note that the right work ethic, when controlling for other variables, only has a statistically significant impact on GPA for upperclassmen and not freshmen. The results may have come out this way because a there was a lot of missing data on GPA for freshmen. That is why it is important to use SEM to model this data. The data suggests that because freshmen, sophomores, and juniors were more likely to do their homework daily they were also more likely to participate in class discussion more often and then receive a higher GPA.

Class year has a direct effect on GPA, which is probably why the bivariate analysis between class year and GPA show something different than what I just predicted. There is a statistically significant relationship between class year and having a GPA between 2.0-3.38 compared to 3.39-4.0. Both freshmen and sophomores are more likely to have a GPA between 3.39 and 4.0, while juniors and seniors are more likely to

have a GPA between 2.0 and 3.38. This may just have to do with the fact that juniors and seniors are taking harder classes where it is more difficult to get a higher GPA.

College adjustment is related to GPA (Yazedjian et al., 2009). A better relationship between parents and children can lead to better adjustment (Yazedjian et al., 2009; Kolkhorst et al., 2010). While my research does not look directly at college adjustment it does show that a strong relationship with parents has an indirect effect on GPA. While other studies have pointed to the fact that students who are attached to their parents have higher self-esteem and life satisfaction while experiencing less stress, anxiety, and depression (Armsden and Greenberg, 1987; McCarthy et al., 2001; Vivona, 2000), my research shows that having an attached relationship with parents allows students access to getting academic help from parents. When controlling for other variables, non-academic parental involvement has an impact on academic parental involvement regardless of gender and class year. A similar relationship was also found in the SEM. This supports Sun et al.'s (2000) research that found no change in the relationship between parents and children during college since class year has no effect on non-academic parental contact. This means that students can benefit from the relationship with parents throughout the college years. This can be seen in the statistically significant bivariate analysis that looks at the relationship between getting help with an academic issue and class year. Both the majority of freshmen and upperclassmen were more likely to report that they were getting help with an academic issue once a month or less. However, freshmen were slightly more likely to report that they were getting help two times a month or more. This can mean that they are getting help adjusting to college.

There has been a debate about whether there are gender differences in attachment to parents. While Lapsley et al. (1990) found no gender difference in attachment, Lye (1996) and Lawton et al. (1994) both found that the relationship between mothers and daughters is the most intimate. There is a statistically significant difference between gender and the amount of non-academic parental contact. Girls in my sample had more non-academic parental contact than boys, which means there is a gender difference in attachment. This is most likely because women are in charge of kin keeping (Lye, 1996) so girls have been socialized to keep in contact with family members. While Sorokou and Weissbrod (2005), found that both genders at least often pursued need-based contact with their parents, my study shows that they are only receiving (at least academic) help from their parents if they already have non-need contact. Because girls are the ones with more non-need contact it is likely that they are pursuing more need-based contact as well.

Using SEM was beneficial to this research because when running OLS regression no relationship was found between non-academic parental contact or academic parental involvement on GPA. The SEM was able to show the reason for this. While the variables combined for non-academic parental involvement do in fact show a latent variable, the variables combined for academic parental involvement do not show a latent variable. Instead these variables work together, with non-academic parental involvement, and with class year in a variety of ways.

Social capital from parents is beneficial to college students just as it is for younger students. My research shows that there needs to be a strong relationship between parents and the child for students to get the benefits from their parents' social capital, just as Coleman (1988) and Putnam (2000) stated. Dika and Singh (2002) shared that parental

involvement is one way of measuring social capital. In my model parental involvement is represented by getting help with an academic issue, academic assignment, and asking about schoolwork. As McNeal (1999) pointed out the effects of social capital are only for people who have the resources to share with their children. That is why freshmen are more likely than seniors to get help with an academic issue. Freshmen are not as specialized as upperclassmen so parents will most likely have more knowledge about what they need help with.

Some research has found no relationship between GPA and parental involvement (Navarro, 2008; Fass and Tubman, 2002; Pang, 2009), which does not seem to be the case. Instead there seems to be both a positive and negative relationship between parental involvement and cumulative GPA as seen in the SEM. Kusterer (2009) also found a negative relationship. One reason for this may have to do with Lareau's (1989) idea that students are feeling overly stressed because of their parents' involvement. My research supports this because the more parents ask about schoolwork, the worse the students' cumulative GPA. It is very likely this is because the students get stressed trying to complete their schoolwork that their parent reminds them about. Similarly, Cutrona et al. (1994) found a positive relationship between parents who believe in their child's ability and students doing better in college. If parents are often asking about schoolwork it is likely they doubt their child's ability to finish their work leading to the student doubting himself/herself and not doing well.

Getting help with an academic assignment leads to a higher GPA. This may be because of Lindt's (2010) idea that parents who talked to their children about academics were more likely to have the goals of gaining skills and having higher grades. Students

who get help with assignments are most likely students who got help with an academic issue. They want to gain skills and this in turn leads to their having a higher GPA.

This research supports much of what was found in previous research. Students with the right academic behaviors tend to have better cumulative GPAs. Females may have an advantage over boys because they are more likely to complete their homework. Students having a strong relationship with their parents leads to their having access to social capital as seen through parental academic involvement. This academic involvement then has both a positive and negative influence on cumulative GPA. This is because helping students academically is supportive and helps them to gain confidence, while asking if they are doing schoolwork may seem unsupportive, which can make students doubt their abilities. Normally people get the results they expect to get so if students think they will not do well then they will not.

CONCLUSION

Family and education are two topics that sociologists explore. Previous literature has looked mostly at the intersection of these topics in regards to high school students and younger. In this study they were looked at in conjunction with regards to college students. In order to see how much influence parents had on college students' grades, the research was done at a university where students had high academic achievement to get in making them of similar intelligence. It is important to realize that in fact many things can influence students' grades.

This research supports much of what was found in previous research. Students with the right academic behaviors tend to have better cumulative GPAs, which is especially true for females. Students having a strong relationship with their parents leads to their having access to social capital as seen through parental academic involvement. This academic involvement then has both a positive and negative influence on cumulative GPA. This is because helping students academically is supportive and helps them to gain confidence, while asking if they are doing schoolwork may seem unsupportive, which can make students doubt their abilities. Normally people get the results they expect to get so if students think they will not do well then they will not. This can also shed some light on the idea of "helicopter parents" or parents who are too involved in their child's lives. My research shows that when parents are too involved, by asking about schoolwork instead of helping their child when they need aid, it actually has a stronger negative effect on GPA.

There are a few things that could be done in the future to add to this research. This research could only discuss the sample and not a larger population. There are a few ways

this can be improved on. For one thing, the sample of students for this study was predominantly female. Because gender has an influence on the relationship between the independent and dependent variables, in the future it would be beneficial to get a sample that is closer to 50% female. Similarly, in the future it would be best to try to get a sample that is split up evenly by class year to see the differences between them better. Also, this study was only done at one school, and a very small subsample of it. It would be hard to say that these results can be applied to students attending that school or other types of institutions. Further research should be done at a variety of institutions to see if the relationships remain the same.

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APPENDIX A

Consent Form for Survey about Parental Influence on College Students' Academics

This form is to request your agreement to participate in a study on parental influence on college students' academics conducted by Jordann Markowitz under the supervision of Dr. Heather Johnson.

What is the purpose of this study?

The purpose of this study is to see how parental involvement in different aspects of college student's lives can affect their academic lives.

What will be involved in participating?

If you agree to this study you will be asked to take a survey asking about your relationship with your parents. The survey should take around 15-20 minutes.

Is this study confidential?

Yes. The records of this study will be kept confidential and any information collected through this research project that personally identifies you will not be voluntarily released or disclosed without your separate consent, except as specifically required by law. In any sort of report that might be written, we will not include any information that will make it possible to identify you as a subject. Your name will not be connected to any survey data. Research records will be stored securely and only researchers will have access to the records.

What risks and benefits are associated with participation?

There may be some emotional risk if you have a strained relationship with your parents. Another risk is a possible breach of confidentiality, which could lead to some embarrassment. To protect against the emotional risk you have the right to not answer any question or to stop taking the survey at any time without harming your current or future relationship with Lehigh University. If this study causes you to feel uncomfortable in any way please schedule an appointment with University Counseling Center at 610-758-3880. Also, a series of precautions are being taken to protect against the risk of confidentiality. The main benefit of this study is understanding the influence parents may have on college student's academics.

What are my rights as a respondent?

You may ask the researcher any question regarding the research, and they will be answered fully. Your participation in this study is completely voluntary. Your decision whether or not to participate will not affect your current or future relations with Lehigh University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What will be published?

The information collected will be used for a Master's thesis and possibly for a conference paper. Only larger trends will be published, not individual subject data.

Will I receive any compensation for participating in this study?

The 150th person to complete the survey will receive a \$25 gift card to Amazon.com. At the end of the survey you will be asked to open a link in a new page to enter your e-mail address, which will be added to the list of respondents. If you are the 150th person, you will be contacted about the best way for you to receive the gift card.

If I want more information, whom can I contact about the study?

The researcher on this study is Jordann Markowitz. If you have any questions after the study please contact the researcher at jfm311@lehigh.edu. You may also contact Dr. Heather Johnson at hbj2@lehigh.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact Susan Disidore or Troy Boni at (610) 758-3021 (email: inors@lehigh.edu) of Lehigh University's Office of Research and Sponsored Programs. All reports or correspondence will be kept confidential.

I have read the above information. I am at least 18 years old. I consent to participate in the study.

I agree ()

I disagree ()

I. Background

This section asks questions about your social background, with attention to areas such as family, childhood, race/ethnicity, and gender. For each of the following questions, please check or circle only one answer.

1. What is your sex? () Male () Female

2. What is your present class year?

() Freshman

() Sophomore

() Junior

() Senior

3. Which college are you a member of?

() Arts and Sciences

() Business and Economics

() Engineering and Applied Science

4. How many siblings do you have? (not including yourself) _____

5. How far away from your home is Lehigh University?

- ☐ 0-2 hours
- ☐ 2-6 hours
- ☐ 6 + hours
- ☐ international student

II. Relationships with your parents

The following questions ask about your relationship with each of your parents. If you lived with someone else most of your life—such as stepparents, grandparents, or guardians—and they served as your parental figure or figures, please feel free to answer questions with this person in mind. Please only mark one answer to each question.

1. What is the current relationship status of your parents?

- ☐ Married
- ☐ Cohabiting, but not married
- ☐ Separated
- ☐ Divorced
- ☐ Widow/Widower
- ☐ Single Parent
- ☐ Other, please specify_____

2. What is the highest level of education reached by either of your parents?

- | | |
|----|--|
| 1 | Less than high school graduate |
| 2 | High school graduate |
| 3 | Postsecondary school other than college
(such as trade or secretarial school) |
| 4 | Some college but no degree |
| 5 | Associates of Arts or Sciences (AA or AS) degree |
| 6 | Bachelor's degree |
| 7 | Some graduate or professional school |
| 8 | Master's degree (such as MA, MSW, MBA) |
| 9 | Professional degree (such as MD, JD, DVM) |
| 10 | Doctorate (PhD) |
| 11 | Other (Please specify:_____) |
| 12 | Don't know |

3. How often does at least one of your parents ask you if you have been doing your college schoolwork?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

4. How often does at least one of your parents help you with an academic assignment?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

5. How often does at least one of your parents help you with an academic issue you are having?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

6. What type of grades does at least one of your parents ask you about?

Check all the apply

- ☐ small assignments
- ☐ short papers
- ☐ research papers
- ☐ quizzes
- ☐ exams
- ☐ midterms
- ☐ finals
- ☐ final class grades
- ☐ semester GPA
- ☐ cumulative GPA
- ☐ none, my parents never ask about my grades

7. Has at least one of your parents ever contacted one of your professors because of an academic issue?

- ☐ Yes ☐ No ☐ I don't know

8. Has at least one of your parents ever contacted any one in Lehigh's administration because of an academic issue?

☐ Yes ☐ No ☐ I don't know

9. How often does at least one of your parents ask about your extracurricular activities?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

10. How often does at least one of your parents talk to you about family topics?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

11. How often does at least one of your parents ask about your friends, including significant others?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

12. How often does at least one of your parents help you with personal issues you are having?

- ☐ Never
- ☐ Less than once a month to once a month
- ☐ Two or three times a month
- ☐ Once or twice a week
- ☐ More than twice a week
- ☐ Daily

13. What is your primary mode of communication with at least one of your parents?

- ☐ e-mail
- ☐ texting
- ☐ phone conversation
- ☐ video chatting
- ☐ in person talking
- ☐ other_____

14. Do you feel close to at least one of your parents?

☐ yes

☐ no

15. Do you talk to one of your parents more than the other?

☐ no

☐ yes, a female parent

☐ yes, a male parent

16. How often do your parents come to visit you at school?

☐ Never

☐ Less than once a month to once a month

☐ Two or three times a month

☐ Once or twice a week

☐ More than twice a week

☐ Daily

III. Academics

The following questions ask about your academic achievement on campus. Please only check one response to each question.

1. What is your current cumulative GPA? _____

2. During your last semester at Lehigh University, how many times a week did you do each of the following? Using the scale below, please circle the appropriate number for each event.

1=Never

2=Less than once a month to once a month

3=Two or three times a month

4=Once or twice a week

5=More than twice a week

6=Daily

a. Complete all of your homework

in preparation for class

1	2	3	4	5	6
---	---	---	---	---	---

b. Attend Professors' office hours

1	2	3	4	5	6
---	---	---	---	---	---

c. Go see a Professor outside of office hours	1	2	3	4	5	6
---	---	---	---	---	---	---

d. Participate in class discussions	1	2	3	4	5	6
-------------------------------------	---	---	---	---	---	---

e. Go to class	1	2	3	4	5	6
----------------	---	---	---	---	---	---

f. Meet with a Teaching Assistant	1	2	3	4	5	6
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Debriefing form

Thank you for volunteering to participate in this study. The purpose of this study is to see what influence parents' involvement in their children lives has on their grades in college. The main hypothesis is that involvement is beneficial to students, but at some point actually hurts their grades. If you have any questions or concerns about the study or would like to know the results of the study please contact Jordann Markowitz at jfm311@lehigh.edu or Dr. Heather Johnson at hbj2@lehigh.edu. If this study has caused you to feel uncomfortable in any way please schedule an appointment with University Counseling Center at 610-758-3880.

APPENDIX B

Table 7: Regression on Cumulative GPA with Control Variables I (Regression not significant)

	<i>Beta</i>
sex(male)	0.195*
class (sophomore)	-0.149
class (junior)	-0.294*
class (senior)	-0.287**
college (business)	-0.147
college (engineering)	-0.244**
hours away from home	-0.045
highest level ed of parent	0.138
relationship of parents (not married)	-0.048
number of siblings	0.128
close (no)	-0.048
talk to mother vs others	-0.041
communication (not phone)	0.004
visit the school	0.049

p <.05* p<.01** p<.001***

JORDANN MARKOWITZ

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SUMMARY

Sociologist at the master's level with a thorough understanding of quantitative methods, qualitative methods, and statistics. Advanced training, education, and research focused on social capital and its application to college students. Strong time management and team working skills honed through leadership roles involving board meetings and event organization.

SKILLS

Proficient in Microsoft Word, Excel, PowerPoint, SPSS (Statistical Package for Social Sciences)
Knowledge of STATA, SAS, Atlas.ti

EDUCATION

LEHIGH UNIVERSITY

Bethlehem, PA

Masters Candidate in Sociology Cumulative GPA: 3.90

May 2013

Relevant coursework: Analysis of Experimental Data, Univariate Statistics Models

FRANKLIN & MARSHALL COLLEGE

Lancaster, PA

Bachelor of Arts, Sociology Cumulative GPA: 3.63

May 2011

Honors: Dean's List all semesters; H.M. J. Klein Scholar; Alpha Kappa Delta National Sociology Honor Society; William M. Kephart Prize in Sociology; Cum Laude

RESEARCH EXPERIENCE

LEHIGH UNIVERSITY

Bethlehem, PA

Research Assistant, Professor Kelly Austin, Sociology

January 2013- Present

LEHIGH UNIVERSITY

Bethlehem, PA

Research Assistant, Professor Ziad Munson, Sociology

June 2012-December 2012

FRANKLIN AND MARSHALL COLLEGE

Lancaster, PA

Hackman Scholar, Professor Katherine McClelland, Sociology

May 2010-July 2010

ADDITIONAL EXPERIENCE

LEHIGH UNIVERSITY

Bethlehem, PA

Department of Sociology and Anthropology Teaching Assistant

August 2011-Present

FRANKLIN AND MARSHALL HUMAN RESOURCES

Lancaster, PA

Administrative Assistant

September 2008 - May 2011

LEADERSHIP

LEHIGH UNIVERSITY GRADUATE STUDENT SENATE

Bethlehem, PA

Secretary

June 2012-Present

PROFESSIONAL PRESENTATION

"How Much Parental Involvement is Too Much in College?" Eastern Sociological Society Conference. Boston, MA. March 21-24, 2013.

PROFESSIONAL AFFILIATIONS

American Sociological Association

2012-2013

Eastern Sociological Society

2013